



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,928	06/27/2003	Makoto Ochi	030777	3870
23850	7590	01/31/2007	EXAMINER	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP			RHEE, JANE J	
1725 K STREET, NW			ART UNIT	PAPER NUMBER
SUITE 1000			1745	
WASHINGTON, DC 20006				
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE		DELIVERY MODE	
3 MONTHS	01/31/2007		PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/606,928	OCHI ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Jane Rhee	1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 15 November 2006.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1,3 and 4 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,3-4 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
     1. Certified copies of the priority documents have been received.  
     2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____	6) <input type="checkbox"/> Other: _____

**DETAILED ACTION**

***Rejection Repeated***

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1,3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bando et al. in view of Maeda et al. (6338917).

As to claim 1, Bando et al. discloses an alkaline storage battery incorporating an electrode group comprising nickel cathodes and anodes (col. 2 lines 45-54), disposed in such a way as to oppose each other with a separator interposed therebetween (col. 7 line 57), wherein the nickel cathodes each include a cathode active material composed mainly of nickel hydroxide, having a coating layer of a cobalt compound (col. 2 lines 50-55) and wherein the alkaline electrolytic solution contains lithium hydroxide of 0.5 to 1.5M (col. 21 line 1).

As to the species of a compound selected from the group consisting of niobium compound, titanium compound, tungsten compound and molybdenum compounds to be added to the coating layer of cobalt compound, Maeda et al. teaches the addition of titanium or niobium to the cobalt compound for the purpose of increasing the oxygen overvoltage that is contained inside the electrically conductive material (col. 3 lines 17-19).

Art Unit: 1745

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide Bando et al. with the addition of titanium or niobium to the cobalt compound in order to increase the oxygen overvoltage that is contained inside the electrically conductive material (col. 3 lines 17-19) which would consequently improve battery performances.

As to claim 2, Bando et al. discloses that it is well known in the art for the cobalt compound to contain alkali metal ions (col. 1 line 30-31) for the purpose to form a higher cobalt oxide of high conductivity on the surface of the particulate nickel hydroxide (col. 1 lines 30-33).

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide the cobalt compound to contain alkali metal ions in order to form a higher cobalt oxide of high conductivity on the surface of the particulate nickel hydroxide.

As to claim 3, Maeda et al. discloses wherein the amount of niobium compound or titanium compound to be added is 0.1-3% by mass in relation to the mass of cathode active material composed mainly of nickel hydroxide, having the coating layer of the cobalt compound (col. 3 lines 27) for the purpose of increasing the oxygen overvoltage that is contained inside the electrically conductive material (col. 3 lines 17-19).

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide Bando et al. with the addition of titanium or niobium to the cobalt compound in the amount of 0.1-3% by mass in relation to the mass of cathode active material composed mainly of nickel hydroxide, having the

Art Unit: 1745

coating layer of the cobalt compound in order to increase the oxygen overvoltage that is contained inside the electrically conductive material (col. 3 lines 17-19) which would consequently improve battery performances.

As to claim 4, Bando et al. discloses that the alkaline electrolytic solution contains sodium hydroxide (col. 20 line 62).

***New Rejection***

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The new matter limitation is "alkali metal ions". The specification teaches alkaline cations which are different from alkali metal ions. Alkaline elements are Be, Mg,Ca, Sr, Ba, Ra wherein alkali elements are Na, Li, K, Rb, Cs and Fr.

***Response to Arguments***

3. Applicant's arguments filed 11/15/2006 have been fully considered but they are not persuasive.

In response to applicant's argument that Bando et al. fail to disclose that the cobalt compound contains alkali metal ions, Bando et al. discloses that it is well known in the art for the cobalt compound to contain alkali metal ions (col. 1 line 30-31) for the purpose to form a higher cobalt oxide of high conductivity on the surface of the particulate nickel hydroxide (col. 1 lines 30-33). Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to provide the cobalt compound to contain alkali metal ions in order to form a higher cobalt oxide of high conductivity on the surface of the particulate nickel hydroxide.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jane Rhee whose telephone number is 571-272-1499. The examiner can normally be reached on M-F 9-6.

Art Unit: 1745

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jane Rhee  
January 23, 2007



PATRICK J. RYAN  
SUPERVISORY PATENT EXAMINER